

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A device for directing data toward destinations, comprising:
- an input interface configured to:
 - receive a non-Asynchronous Transfer Mode (ATM) data stream from a single port, the non-ATM data stream including synchronous optical network (SONET) frames,
 - identify ATM cells and Internet Protocol (IP) packets within the non-ATM data stream, and
 - forward the ATM cells and IP packets;
 - a SONET deframer configured to deframe the SONET frames in the non-ATM data stream;
 - an IP packet forwarding facility configured to:
 - receive IP packets from the input interface, and
 - forward the IP packets toward their destinations; and
 - an ATM cell switching facility configured to:
 - receive ATM cells from the input interface, and
 - switch the ATM cells toward their destinations.
2. (original) The device of claim 1 further comprising a housing that houses

both the IP packet forwarding facility and the ATM cell switching facility.

3. (original) The device of claim 1 further comprising an application specific integrated circuit (ASIC) that contains at least a portion of both the IP packet forwarding facility and the ATM cell switching facility.

4. (canceled)

5. (canceled)

6. (original) The device of claim 1 wherein the device includes output ports for outputting data and wherein the ATM cell switching facility further comprises an ATM cell lookup for identifying which of the output ports to direct ATM cells in the input data toward, based on address information contained in the ATM cells.

7. (original) The device of claim 1 wherein the device includes output ports for outputting data and wherein the IP packet forwarding facility further comprises an IP packet lookup for identifying which of the output ports to direct IP packets in the input data toward based on address information contained in the IP packets.

8. (canceled)

9. (canceled)

10. (canceled)

11. (currently amended) In a device for directing input data traffic received on input ports to output ports, a method comprising:

receiving a non-Asynchronous Transfer Mode (ATM) data stream at one of the input ports;

identifying Internet Protocol (IP) packets and ATM cells in the received non-ATM data stream;

directing an identified IP packet that is received on the one input port to at least one of the output ports based on an IP lookup operation; and

directing an identified ATM cell that is received on the one input port to at least one of the output ports based on an ATM lookup operation,

wherein the device includes a Synchronous Optical Network (SONET) deframer and wherein the SONET deframer is used to deframe any SONET frames in the non-ATM data stream received at the one input port.

12. (canceled)

13. (original) The method of claim 11 wherein a separate ATM lookup and IP lookup is provided for each of the input ports.

14. (currently amended) A device for directing both Internet Protocol (IP)

packets containing address information identifying destinations and Asynchronous Transfer Mode (ATM) cells containing address information identifying destination toward their destinations, comprising:

input ports for receiving streams of input data, at least one of the streams of input data including a non-ATM stream of input data, the non-ATM stream of input data including an OC-48 data stream;

output ports for outputting streams of data;

line cards for directing input data received at the input ports to the output ports, each said line card including:

a device configured to identify IP packets and ATM cells in the streams of input data;

an IP packet forwarding facility for directing the identified IP packets to the output ports based on the address information contained in the IP packets; and

an ATM cell forwarding facility for directing the identified ATM cells to the output ports based on the address information contained in the ATM cells.

15. (original) The device of claim 14 further comprising an interconnect for interconnecting link cards to facilitate communication among the line cards.

16. (previously presented) A device for directing both Internet Protocol (IP) packets containing address information identifying destinations and Asynchronous Transfer Mode (ATM) cells containing address information identifying destination

toward their destinations, comprising:

input ports for receiving streams of input data;

output ports for outputting streams of data;

line cards for directing input data received at the input ports to the output ports, each said line card including:

a device configured to identify IP packets and ATM cells in the streams of input data;

an IP packet forwarding facility for directing the identified IP packets to the output ports based on the address information contained in the IP packets; and

an ATM cell forwarding facility for directing the identified ATM cells to the output ports based on the address information contained in the ATM cells; and

a multiplexer positioned before a select one of the input ports to multiplex multiple data streams into a single input data stream.

17. (canceled)

18. (previously presented) A device for directing both Internet Protocol (IP) packets containing address information identifying destinations and Asynchronous Transfer Mode (ATM) cells containing address information identifying destination toward their destinations, comprising:

input ports for receiving streams of input data;

output ports for outputting streams of data;
line cards for directing input data received at the input ports to the output ports, each said line card including:
a device configured to identify IP packets and ATM cells in the streams of input data;
an IP packet forwarding facility for directing the identified IP packets to the output ports based on the address information contained in the IP packets;
and
an ATM cell forwarding facility for directing the identified ATM cells to the output ports based on the address information contained in the ATM cells;
and
a multiplexer positioned at a selected one of the output ports to multiplex output data from multiple tributaries into a single output data stream.

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19. (original) The device of claim 14 wherein the IP packet forwarding facility is part of an application specific integrated circuit (ASIC).

20. (currently amended) The device of claim 14 wherein the ATM cell forwarding facility is part of an ~~applicator~~ application specific integrated circuit (ASIC).